North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Don Van der Vaart
Secretary

August 31, 2015

Mr. Christopher J. Ward, PG
ESP Associates, P.A.
PO Box 7030
Charlotte, NC 28241

Re: Request for Work Plan & Cost Proposal for Task Order 808DP-16
Geotechnical Investigation for Aiding Remedial Design
Falls Dump
2731 Forbes Road, Gastonia, Gaston County, NC
ID# NONCD0000808

Dear Mr. Ward:

Submit a task work plan and cost estimate to perform remedial investigation-contaminant delineation phase activities at the above referenced site. Conduct these activities in accordance with State Contract No. N13001S.

Investigation Goals: The goal for this task is to carry out geotechnical work to aid the remedial action phase (RAP) design for the site.

Scope of work for Task Order 808DP-16A:

- Prepare a work plan in accordance with *ESP's* approved standard operating procedures dated *February 1, 2013,* and include a schedule of daily activities.
- Submit an itemized cost estimate that identifies personnel and materials involved.
- Reference the most recent Guidelines for Addressing Pre-Regulatory Landfills and Dumps for details regarding procedures
- Ensure personnel in the field are qualified to identify contaminated material and landfill waste and comply with OSHA-required health and safety training.
- Before task activities begin, photograph areas or objects that may be disturbed. If needed, photograph affected areas and objects, restoration efforts, and noteworthy items encountered during task activities. Submit these photographs upon completion of the activities, and a review will determine if any need to be included in the report.
- Collect GPS coordinates along the waste disposal boundary. Report coordinates in decimal degrees to the seventh order using the North American Datum of 1983 (NAD83) format and latitude and longitude using WGS 84 format. These coordinates will be tabulated and included as an appendix. The tabulated coordinates for the landfill perimeter should start at the northernmost point of the perimeter and be listed in a clockwise progression around the perimeter.
- Include background (light grey) topographic contour lines on figures detailing the Site and Site vicinity.

- For any invasive activities, provide a plan to properly manage investigation derived waste (IDW). If sampling results indicate non-hazardous IDW, spread within the waste disposal area. If sampling results indicate hazardous IDW, analyze containerized waste as required by waste hauler and include details of sampling and disposal of drums in the proposal. Remove all drummed waste and associated fencing from site within 90 days after field activities are concluded.
- For any field work, minimize the clearing of vegetative material to enable access to proposed sampling points. Using hand tools for clearing is the preferred method, otherwise an explanation must be provided for use of heavy equipment.
- Submit samples to a North Carolina-certified laboratory and analyze for the following parameters by the most current U.S. EPA Contract Laboratory Program Target Compound List: volatile organic compounds by SW-846 method 8260, 1,4-dioxane by Method 8260SIM, semi-volatile organic compounds by SW-846 method 8270, 14 metals by SW-846 method 6020, mercury by method 7471, ammonia by SM 4500, and nitrate and sulfate by EPA Method 300. Please note that any alternate method should be the U.S. EPA Method having the lowest detection limit and that at least achieves the detections equivalent to the 15A NCAC 2L standards or where these are not available, then federal maximum contaminant limits (MCLs). Soil analysis methods must meet the IHSB Preliminary Soil Remediation Goals Table. Initial samples also need 10 Tentatively Identified Compounds (TICs).
- Note: once all contaminants are determined, laboratory analysis may be reduced to those positively identified contaminants.

Subtask 808DP-16B: Geotechnical Investigation:

- Advance, geo probe type drilling using augus, at minimum 11 borings at the site (see approximate boring locations on **Attachment 1**). Install the borings to a depth of 15 feet or waste if encountered first. For budgeting purpose, the cost of 22 borings may be proposed.
- When waste is first encountered at the borings, advance one (1) additional foot to collect samples for lead, thallium, and asbestos analysis.
- At each parcel, collect one sample within the waste for laboratory analysis of VOCs, SVOCs (without TICs), 15 metals, 1,4,Dioxane, NO3, SO4, NH3.

Task Order 808DP-16C: Report Compilation

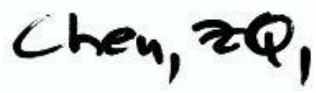
Compilation of the report will be approved as a separate task order. The Report will be titled "*Remedial Investigation – Geotechnical Investigation for Aiding Remedial-Action Design*."

The report is to contain the following items:

- Text, tables, and figures to adequately summarize task activities.
- A section concerning any variations from the work plan or your SOPs.

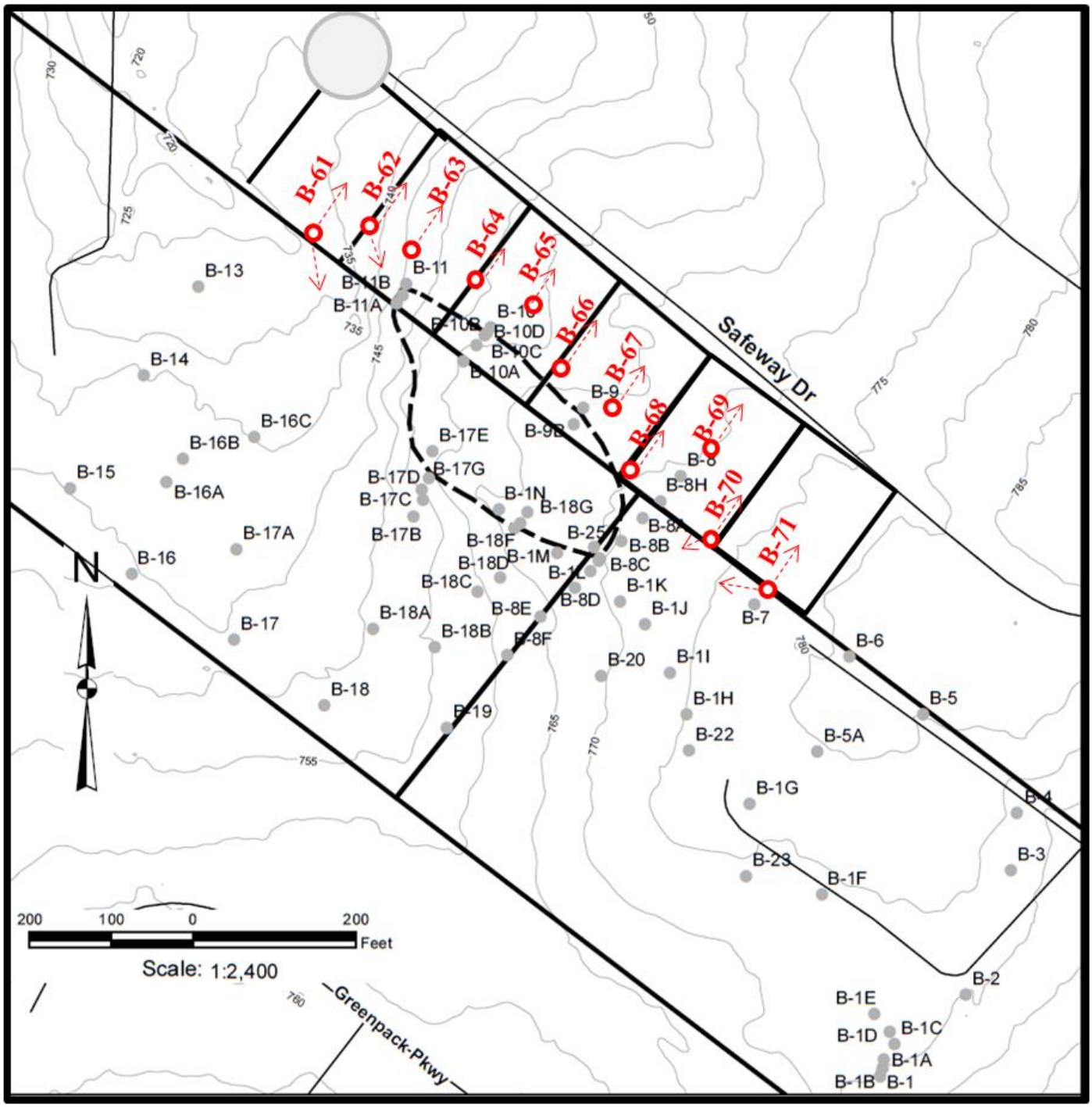
Provide the work plan and cost estimate by *September 7, 2015*. A task authorization to begin work will be issued based on the approved proposal. Do not proceed with tasks prior to receiving this authorization. If you have any questions or concerns, contact me at zi-qiang.chen@ncdenr.gov or (919)707-8347.

Sincerely,



Zi-Qiang Chen, PhD, Environmental Engineer II
Division of Waste Management, NCDENR

Figure 1 Geotechnical Investigation for Aiding RAP Design -- Task Order 808DP-16



B-61 **Borings & potential subsequent boring directions (at 15' to 30' spacing)**

Figure 2 Cover Soil Sampling Locations during Task Order 808DP-15 Investigation